

VII. PHYSICAL PLANT INVENTORY

FACILITY INVENTORY AND INSPECTION PROGRAM

Buildings and other structures in state parks are necessary to provide services to park visitors. These structures are essential for protecting public safety, health, and welfare while providing opportunities for outdoor recreation. They include infrastructure, such as roads, parking lots, trails, and systems for potable water, electrical distribution, and sewage treatment. They also include operational and recreational facilities, such as campgrounds, picnic areas, concession building, boardwalks, park offices, residences, pump houses, warehouses, barracks, maintenance shops, visitor centers, etc. These facilities must be properly maintained to provide for a safe, continuous, and quality park-use experience.

The structures within Fort Fisher State Recreation Area are generally in reasonably fair condition, especially considering the harsh environment that exists at the beach. A description of the three structures currently in use follows.

Fort Fisher State Park Buildings In Use

Visitor Contact Station: Built in 1998. 2549 enclosed square feet. This heated, wood pier supported wood frame structure is used primarily as a visitor center and administrative offices. A concession stand is operated during summer months. A spiral staircase leads to a second floor catwalk with octagonal walls. The catwalk lacks accessibility, and problems with past visitor use of the spiral staircase have led to this area being removed from public use. The building's condition is good.

Shelter: Built in 1982. A 54 square foot, square shelter with six foot wash/rinse stations. The foot wash/rinse stations are heavily used

Restroom/Changing Station: Built in 1982. An 857 square foot, unheated and pre-manufactured structure. It originally was also used as a concession stand, but now the former concession area is used for storage. It is in poor to fair condition.

ROAD AND UTILITY INVENTORY

Background information

The Institute for Transportation Research and Education (ITRE) conducted a road inventory for Fort Fisher State Park in March of 1990 and found: .35 miles of paved road; 4.15 miles of unpaved road; and 7,470 square yards of paved parking lots.

The entrance road and gravel parking lot were constructed in 1989-1990. The parking lot was subsequently paved by the NC Department of Transportation in 1994. Division construction staff conducted a survey of the roads, parking areas and utilities at Fort Fisher State Recreation Area in March 2004 in preparation for this general management plan.

Road and Parking Inventory

Description

The road systems are comprised of a main park road (Loggerhead Road) that begins at US 421 and ends at the Fort Fisher State Aquarium. Loggerhead Road runs approximately .35 miles to the recreation area's paved parking lot, and then it continues for another .5 miles to the aquarium. This road is now owned and maintained by the NC Department of Transportation (NCDOT). The four-wheel drive beach access road (which is called Ram's Gate road) is approximately 4.2 miles long. Only .25 miles is scraped and maintained by NCDOT. The beach access road will accommodate two-way traffic for the portion of road that is maintained by NCDOT.

Loggerhead Road was widened and raised in 2000 to accommodate anticipated traffic due to the aquarium expansion and to avoid flooding. The road is 20 feet wide with six-foot shoulders. The paved road and recreation area parking lot have an eight-inch stone base with two inches of asphalt. There are currently 191 parking spaces with seven handicap spaces and two bus parking spaces. Eighteen-inch reinforced concrete pipes located at the driveways provide drainage.

Current Conditions

Loggerhead Road was paved in 2000 and is in good condition. The parking lot was paved in 1994 and is in fair to good shape. Culverts are in good condition. Road shoulders are in fair shape but suffer from overflow parking along the road. With bike lanes added to the road, roadside parking and bike use may result in safety problems for both bikers and those parking.

Repair and Road Needs

Road-side parking should be prohibited in road shoulder areas where there are safety concerns by the use of signs, posts and rope, and/or bollards. The parking lot needs striping, and NC DOT will complete this task in the near future. There is also a need for an overflow parking lot for days of extremely high visitation. Permitting for an expansion of the parking lot will be hard to obtain. A parking area in front of the park entrance might be an alternative possibility. There is a need to relocate the beach access road traffic through the existing parking lot in order to better control traffic to the beach.

Repair Costs

1. Parking lot striping: \$ 3,500.
2. Gravel overflow parking: 50 spaces at \$1500 per space= \$ 75,000.
3. Beach access road relocation: \$ 50,000.

Sewer System

Description

There is only one sewer system in the park. The Fort Fisher toilet/change building and the new contact station/concession building feed into one system located in front of the toilet /change building. The system consists of a 1000-gallon septic tank with three 150-foot drain lines. There is a concrete distribution box and the tank has concrete risers.

Current Conditions

The system was replaced in March 2002 and appears to be in good shape with no effluent surfacing.

Repair Needs and Recommendations

The system is currently undersized and is subject to failure at anytime due to increased usage and demand. Failure of this system would have a negative environmental impact and result in negative publicity. A new sewage pump station needs to be constructed beside the existing system and waste pumped to the Fort Fisher Aquarium force main that runs along Loggerhead Road. This force main was designed to handle the park's sewage flows when it was constructed. The high priority project will be handled using South District major maintenance funding.

Repair Costs

Install a sewage pump station and force main to the aquarium force main: \$ 100,000, including design and tap on fees for the towns of Fort Fisher and Carolina Beach.

Water System

Description

The park is supplied water by the Town of Kure Beach. The park installed a new four-inch PVC waterline in 1990. The aquarium also uses this line for their water supply. The line ties into the Town of Kure Beach's waterline located at the Fort Fisher State Historic Site. The water piping is class 200 PVC piping of varies sizes with valves at all service connections. There is a meter at the toilet/change building and a meter at the outside showers. The park superintendent will check on whether the aquarium pays for their water use.

Current Conditions

The main lines are in good shape. The valves are in fair shape but need to be exercised on a routine schedule. A record of water use should be kept for a two-year period in order to determine the sewage flow and cost for the new sewage lift station. No repairs are needed.

Electrical System

Description

The park power line is underground and is supplied by Progress Energy Corporation (Formerly CP&L). A pad-mounted transformer is located at each building site. Progress Energy owns the underground power lines.

Current Conditions

The system was installed in the late 1980s and in 2000 and is in good shape. No repairs are needed.

Telephone

Description

Bell South provides phone service. The park has one phone line that serves the park office, one line for the fax and Internet, and a separate line for the fire and security system. There are three phones in the office.

Current Conditions

The telephone system is in good condition. There is a need for one additional line for Internet service.

MAJOR CAPITAL IMPROVEMENT PROJECT PRIORITIES

As a part of the general management plan process, the one proposed capital improvement project at Fort Fisher State Recreation Area - the construction of two ranger residences - was carefully reviewed. Because there is no existing state recreation area land suitable for construction of ranger residences, and because other suitable adjacent land is not available for acquisition, the proposed project was eliminated. Further discussion of the housing issue at Fort Fisher is contained in Chapter VIII.

In reviewing other capital improvement needs, the general management plan evaluation team considered factors such as changes in environmental regulations, condition of facilities, natural heritage inventory, recreation demand, operational issues and needs, visitor safety considerations, State Park Act mandates, and trends. Because there is so

little land at Fort Fisher State Recreation Area suitable for development of additional recreational facilities, no new capital improvement projects were proposed. A sun shelter, picnic improvements, and sewer system improvements are needed, but these needs will be addressed using major maintenance funds because their estimated construction cost does not meet the minimum for a capital improvement project.

01/07